SOURCE: CGD 81–030, 53 FR 17838, May 18, 1988, unless otherwise noted.

Subpart 62.01—General Provisions

§ 62.01–1 Purpose, preemptive effect.

The purpose of this part is to make sure that the safety of a vessel with automated vital systems, in maneuvering and all other sailing conditions, is equal to that of the vessel with the vital systems under direct manual operator supervision. The regulations in this part have preemptive effect over State or local regulations in the same field.

[CGD 81–030, 53 FR 17838, May 18, 1988, as amended by USGD–2006–24797, 77 FR 33874, June 7, 2012]

§ 62.01–3 Scope.

(a) This part contains the minimum requirements for vessel automated vital systems. Specifically, this part contains—

(1) In subpart 62.25, the general requirements for all vital system automation;

(2) In subpart 62.30, the criteria used to evaluate the designed reliability and safety of all automated vital systems;

(3) In subpart 62.35, the minimum additional equipment, configuration, and functional requirements necessary when certain vital systems are automated; and

(4) In subpart 62.50, the minimum additional requirements when automated systems are provided to replace specific personnel or to reduce overall crew requirements.

§ 62.01–5 Applicability.

(a) *Vessels.* This part applies to self-propelled vessels of 500 gross tons and over that are certificated under subchapters D, I, or U, to self-propelled vessels of 100 gross tons and over that are certificated under subchapter H, and to OSVs of at least 6,000 GT ITC (500 GRT if GT ITC is not assigned) as defined in § 125.160 of this chapter.

(b) *Systems and equipment.* Except as noted in § 62.01–5(c), this part applies to automation of vital systems or equipment that—

(1) Is automatically controlled or monitored;

(2) Is remotely controlled or monitored; or

(3) Utilizes automation for the purpose of replacing specific personnel or to reduce overall crew requirements.

(c) *Exceptions.* This part does not apply to the following systems and equipment unless they are specifically addressed or unless their failure would degrade the safety and reliability of the systems required by this part:

(1) Automatic auxiliary heating equipment (see part 63 of this subchapter).

(2) Steering systems (see subparts 58.25 and 111.93 of this chapter).

(3) Non-vital and industrial systems.

(4) The communication and alarm systems in part 113 of this chapter.

(d) *Central control rooms.* The requirements of subpart 62.50 only apply to vessels automated to replace specific personnel or to reduce overall crew requirements, except where the main propulsion or ship service electrical generating plants are automatically or remotely controlled from a control room. In this case, § 62.50–20(a)(3) (except the provision in paragraph 62.50–20(a)(3)(ii) relating to electrical power distribution), (b)(3), (c), (e)(1), (e)(2), (e)(4), and (f)(2) apply, regardless of manning.

[CGD 81–030, 53 FR 17838, May 18, 1988, as amended by USCG–2000–7790, 65 FR 58460, Sept. 29, 2000; USCG–2012–0208, 79 FR 48925, Aug. 18, 2014]

Subpart 62.05—Reference Specifications

§ 62.05–1 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/*

ibr_locations.html. The material is also available for inspection at the Coast Guard Headquarters. Contact Commandant (CG–ENG), Attn: Office of Design and Engineering Systems, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7509. The material is also from the sources in paragraph (b) of this section.

(b) *American Bureau of Shipping (ABS)*, ABS Plaza, 16855 Northchase Drive, Houston, TX 77060:

(1) Rules for Building and Classing Steel Vessels, Part 4 Vessel Systems and Machinery (2003) (''ABS Steel Vessel Rules''), 62.25–30; 62.35–5; 62.35–35; 62.35–40; 62.35–50; 62.50–30; and

(2) [Reserved]

[USCG–2003–16630, 73 FR 65189, Oct. 31, 2008, as amended by USCG–2009–0702, 74 FR 49229, Sept. 25, 2009; USCG–2012–0832, 77 FR 59778, Oct. 1, 2012; USCG 2013–0671, 78 FR 60149, Sept. 30, 2013]

Subpart 62.10—Terms Used

§ 62.10–1 Definitions.

(a) For the purpose of this part:

Alarm means an audible and visual indication of a hazardous or potentially hazardous condition that requires attention.

Automated means the use of automatic or remote control, instrumentation, or alarms.

Automatic control means self-regulating in attaining or carrying out an operator-specified equipment response or sequence.

Boiler low-low water level is the minimum safe level in the boiler, in no case lower than that visible in the gage glass (see §52.01–110 of this chapter, Water Level Indicators).

Engineering Control Center (ECC) means the centralized engineering control, monitoring, and communications location.

Failsafe means that upon failure or malfunction of a component, subsystem, or system, the output automatically reverts to a pre-determined design state of least critical consequence. Typical failsafe states are listed in Table 62.10–1(a).

TABLE 62.10–1(a)—TYPICAL FAILSAFE STATES

System or component	Preferred failsafe state
Cooling water valve	As is or open.
Alarm system	Annunciate.
Safety system	Shut down, limited, or as is & alarm.
Burner valve	Closed.
Propulsion speed control	As is.
Feedwater valve	As is or open.
Controllable pitch propeller	As is.
Propulsion safety trip	As is & alarm.
Fuel tank valve	See §56.50–60(d).

Flooding safety refers to flooding detection, watertight integrity, and dewatering systems.

Independent refers to equipment arranged to perform its required function regardless of the state of operation, or failure, of other equipment.

Limit control means a function of an automatic control system to restrict operation to a specified operating range or sequence without stopping the machinery.

Local control means operator control from a location where the equipment and its output can be directly manipulated and observed, e.g., at the switchboard, motor controller, propulsion engine, or other equipment.

Manual control means operation by direct or power-assisted operator intervention.

Monitor means the use of direct observation, instrumentation, alarms, or a combination of these to determine equipment operation.

Remote control means non-local automatic or manual control.

Safety trip control system means a manually or automatically operated system that rapidly shuts down another system or subsystem.

System means a grouping or arrangement of elements that interact to perform a specific function and typically includes the following, as applicable:

A fuel or power source.
Power conversion elements.
Control elements.
Power transmission elements.
Instrumentation.
Safety control elements.
Conditioning elements.

Vital system or equipment is essential to the safety of the vessel, its passengers and crew. This typically includes, but is not limited to, the following: